Claims

[c1] A method for building an as-needed computer generated model, comprising the steps of:

storing a max-case model file relating to a max-case design model, wherein said max-case design model includes plurality of model sub-components; extracting viewer-readable files for each of said plurality of model sub-components;

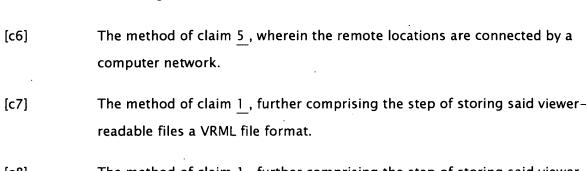
generating a max-case design script including retrieval information for each of said plurality of model sub-components;

receiving a user selection of particular as-needed model sub-components; generating an as-needed design script including retrieval information for each of the as-needed model sub-components;

retrieving, in a model viewing application, the viewer-readable files for each of the as-needed model sub-components;

building the as-needed model from the retrieved viewer-readable files; and displaying the as-needed model to the user.

- [c2] The method of claim 1, wherein the step of generating a max-case design script further comprises the step of extracting location information for each of the model sub-components.
- [c3] The method of claim 1, further comprising the step of storing said viewer-readable files in at least one computer-readable medium.
- [c4] The method of claim 1, further comprising the step of storing said user selection of particular as-needed model sub-components in at least one computer-readable medium.
- [c5] The method of claim 1, wherein at least the step of: extracting viewer-readable files for each of said plurality of model sub-components; receiving a user selection of particular as-needed model sub-components; and displaying the as-needed model to the user are completed at remote locations to each other.



- [c8] The method of claim 1, further comprising the step of storing said viewer-readable files in a TIFF file format.
- [c9] The method of claim 1, further comprising the step of storing said max-case design script and said as-needed design script in an ASCII file format.
- [c10] The method of claim 1, further comprising the steps of:
 extracting spatial orientation information related to the three dimensional orientation of each of the model sub-components and including the spatial orientation information in the max-case design script;
 receiving, from the user, sub-component placement and orientation information for each as-needed model sub-component; and including within the as-needed design script, the received sub-component placement and orientation information.
- [c11] The method of claim 10, wherein said spatial orientation information includes six degrees of freedom.
- [c12] The method of claim 10, wherein said spatial orientation information includes coordinates for an angle of rotation about each of the x, y, and z axes, relative to a pre-established coordinate axes, and an offset in each of the x, y, and z directions relative to a predetermined model center point.
- A method for building and displaying an as-needed computer generated model, comprising the steps of:

 receiving a selection of a plurality of model sub-components that, when assembled together, form the as-needed computer generated model; executing an as-needed script readable by a model viewing software application and related to the selected plurality of model sub-components,

wherein the as-needed script includes retrieval information for each of the plurality of model sub-components;

retrieving, based upon said as-needed script, a plurality of viewer-readable files corresponding to the selected plurality of model sub-components; building the as-needed computer generated model from the plurality of retrieved viewer-readable files in a model viewing software application; and displaying the as-needed computer generated model in the model viewing software application.

[c14] A system for building an as-needed computer generated model, comprising:

a multi-dimensional modeling tool for generating and storing a max-case

model file relating to a max-case design model, wherein said max-case

design model includes plurality of model sub-components;

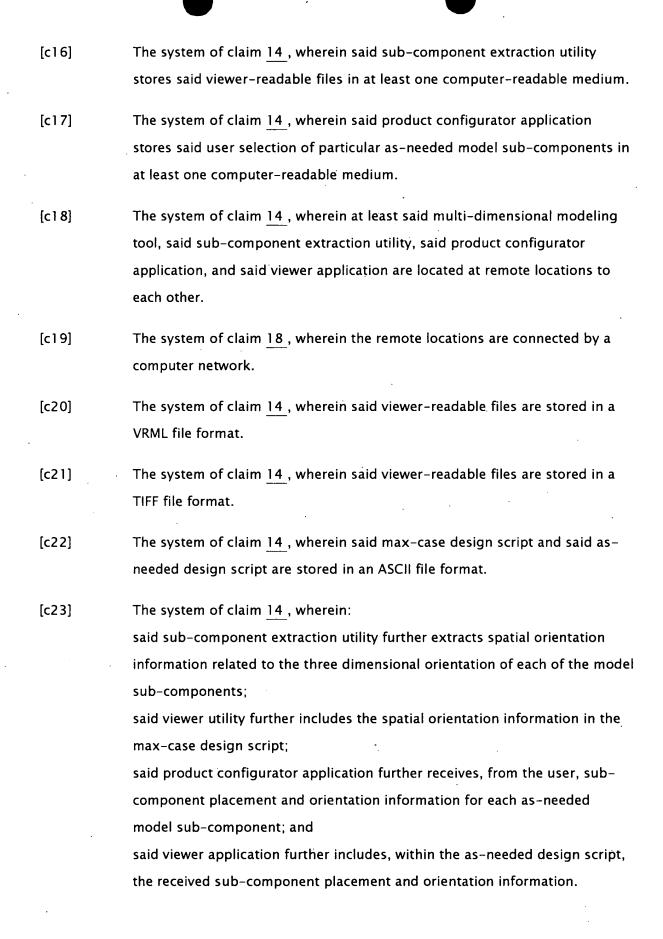
a sub-component extraction utility electronically connected to said multidimensional modeling tool for extracting viewer-readable files for each of said plurality of model sub-components;

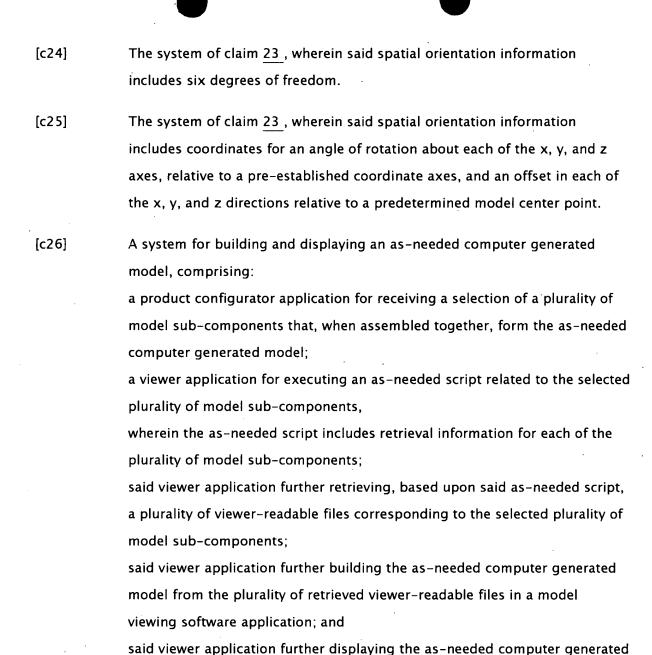
a viewer utility electronically connected to said sub-component extraction utility for generating a max-case design script that includes at least retrieval information for each of said plurality of model sub-components;

a product configurator application electronically connected to said viewer utility for receiving a user selection of particular as-needed model sub-components; and

a viewer application electronically connected to said product configurator application and said sub-component extraction utility for generating an asneeded design script including retrieval information for each of the asneeded model sub-components, retrieving, the viewer-readable files for each of the asneeded model sub-components, building the asneeded model from the retrieved viewer-readable files; and displaying the asneeded model to the user.

[c15] The system of claim 14 wherein said viewer utility extracts location information for each of the model sub-components.





model in the model viewing software application.